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# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

No. 165

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BRIEFS

ANTARCTIC COMPUTER LINK--The first ever computer link between Australia and Antarctica has been established by amateur radio hams in the University of NSW. A physicist working at a Government research centre in the Antarctic, Mr David Robinson, has logged data via amateur radio into one of the university's computers. The university's amateur radio society president, Mr Michael Katzmann, said the radio data link was believed to be the first of its kind. Mr Robinson, who is a physicist with the Australian Antarctic Research Expedition at Mawson base, sent his data to a DEC PDP/11-70 computer run by the University of NSW Computer Science Department by using a high frequency amateur radio transmission band. [Text] [Canberra THE AUSTRALIAN in English 28 Apr 81 p 28]

CSO: 5500

## SITE CHOSEN FOR SATELLITE PROJECT TESTING FACILITY

Madras THE HINDU in English 15 Apr 81 p 16

[Text]

NEW DELHI, April 14

The Space Department has chosen a site at Mahendragiri (Trunselvi district) in Tamil Nadu for setting up the liquid engine and stage testing facility under the Polar Satellite Launch Vehicle (PSLV) project.

The facility is part of a project aimed at developing a satellite launch vehicle with a liquid second-stage capable of injecting a 600 kg satellite into polar sun-synchronous orbit at 500-1000 km altitude.

Besides the site at Mahendragiri, the Department has proposed to acquire 200 acres at Valanale—20 km from Trivendrum—to locate facilities for structural and environmental testing, and system integration for the PSLV project.

The project is one of the two taken up by the Indian Space Research Organisation (ISRO) to develop more powerful launch vehicles, on the basis of the experience gained from the SLV-3 launched in July last.

The other project is Augmented Satellite Launch Vehicle (ASLV), aimed at achieving in two or three years a vehicle based on SLV-3 as the core with minimum modifications, capable

of placing a 150-kg payload in near-earth orbit from the Sriharikota range.

Leap year The Department has in its annual report described 1980 as "leap year" in the sense that it marked the beginning of a new era in space programme with the successful launching of SLV-3 and placing of the Rohini satellite in orbit.

It is busy with launching two multi-purpose first generation inert spacecraft in the first quarter of 1982.

The two spacecraft are being built by the Ford Aerospace and Communications Corporation of the U.S. under a contract with the Indian Space Department.

The master control facility for the test-I is being set up in Hassan in Karnataka. The facility consists of two independent satellite control earth stations. This will control and manage the satellites during orbit-raising and on-orbit phases.

During the orbit-raising phase, the facility in Hassan will be supported by remote tracking stations.

The Department has asserted that while the first generation space craft is being processed from abroad the second and subsequent generations will be indigenously designed and built. Provision has been made in the R and D programme for the decade 1980-90 to achieve this.

CSO: 5500



## STEEL SHORTAGE AFFECTING TELECOMMUNICATIONS PROJECTS

Madras THE HINDU in English 1 May 81 p 16

[Text]

NEW DELHI, April 30

Shortage of steel, aluminum, pig iron and other essential raw materials has severely hit the implementation of telecommunication projects and maintenance works including the opening of the long distance public call offices and new trunk lines.

The Steel Ministry has pleaded that it is not able to meet the P. & T. requirements as shortage of power and coal has affected steel production.

As against the requirements of 27,56,062 poles during 1980-81, the actual supplies amounted only to 7,86,637. The supplies of the other items in 1980-81 were as follows, the figures in brackets indicating the requirements.

Telegraph lines and telephones (20,86,490) 6,78,184; stalks (40,96,300) 6,10,664; sockets (10,78,100) 2,09,159; galvanized iron wire (20,875 tonnes) 11,354 tonnes; ACSR wire (1,01,974 kms) 18,448 kms. The raw materials required for the production of these

items which are in short supply include hot-rolled coils of 2 to 2.5 mm thickness, telechannels and billets, 8 mm wire rods, EC grade aluminum, etc.

In the case of hot-rolled coils, the annual requirements of the P. and T. for its telecommunication projects was around 45,000 tonnes while the total availability amounted only to 19,500 tonnes out of which as much as 15,000 tonnes were to be met from imports. The imports are yet to arrive.

Billet availability was only 6,000 tonnes against the requirement of 15,000 tonnes while the quantity actually received by the P. and T. was only 4,000 tonnes. The demand for pig iron for the manufacture of sockets was about 40,000 tonnes while the availability did not exceed 9,000 tonnes.

Shortages in the supply of telecommunication equipment from the Indian Telephone Industries, Bharat Electronics and other public sector units has also affected the implementation of Plan projects.

CSO: 5500



## BRIEFS

RADIO LINK SETS--New Delhi, April 29 (PTI & UNI)--The government is importing multi-purpose radio link sets in a bid to "revolutionise" telephone services in the rural areas, the Rajya Sabha was informed at question time today. The communications minister, Mr C. M. Stephen, said such sets would provide telephone links within villages and between villages without any need for wires within a radius of 60 km. The first unit would start from the Agartala (Tripura) area. Orders had been placed to import such units for a dozen areas. The Minister said that out of five lakhs villages in the country, 1.37 lakhs had post offices and 19,000 had long distance public telephones. It was proposed to provide telephones to another 20,000 villages in the sixth plan. Meanwhile the government was going ahead with the satellite communications system to link up far-flung areas with trunk routes. [Excerpt] [Bombay THE TIMES OF INDIA in English 30 Apr 81 p 19]

SATELLITE DEVELOPMENTS--Bangalore, April 16. The engineering model of the shipborne communication terminal developed by the Indian Space Research Organisation (ISRO) is likely to be installed on a ship for trials soon, according to a report of the Space Department. The terminal will be used with the proposed international maritime satellite system. All model subsystems have been developed and integration of the complete terminal is in progress. The subsystems are functioning normally, the report said. After considering various design options, the choice for a seaworthy protomodel had been made. This was likely to be ready by December this year. The first Indian satellite, 'Rohini,' was expected to function for 600 days as against 100 days estimated originally, the report said. The ISRO Satellite Center had also developed a spectro-radiometer which was capable of providing characteristics of vegetation. It had evoked considerable interest from various users including the Geological Survey of India and the University of Agriculture here. The improved prototypes requested by these agencies were currently being made, the report said.--PTI [Text] [Madras THE HINDU in English 17 Apr 81 p 6]

CSO: 5500

BRIEFS

GUANGDONG JAPANESE COMMUNICATIONS--China's first computer-controlled automatic telecommunications relay equipment imported from Japan has been installed at the Guangzhou Telecommunications Bureau. A signing ceremony for handing over the equipment was held on 8 April. The newly installed equipment can handle 5,400 telegrams an hour rapidly and accurately. [HK091505 Guangzhou Guangdong Provincial Service in Mandarin 0445 GMT 8 Apr 81 HK]

LIAONING BROADCASTING--Liaoning Province has vigorously developed its broadcast work since the 3d plenary session of the 11th CCP Central Committee. The province's 34 million people now have 10 million radios, 600,000 televisions and, in rural areas, 3 million wired broadcast loudspeakers. [Shenyang Liaoning Provincial Service in Mandarin 2200 GMT 11 Apr 81 SK]

HEILONGJIANG TELEVISION RELAY STATION--To enable the people to watch television programs, Raohe County in Heilongjiang Province has established a relay station to relay programs of the Beijing television station. The station went into operation 1 May. [Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 1 May 81 SK]

NEW HENAN MUNICIPAL RADIO STATION--Luoyang Municipal People's Broadcasting Station will begin broadcasting on 1 May. The tasks of the station are publicizing Marxism-Leninism-Mao Zedong thought, and the party's line, principles and policies, popularizing scientific and cultural knowledge, enriching the masses lives by providing cultural entertainment and promoting the four modernizations. The station's frequency is 1100. It will broadcast 3 times a day. The first transmission is from 5:40 to 8:00 [2140 to 0000 GMT]. The second transmission is from 11:25 to 13:30 [0325 to 0530 GMT] and the third transmission is from 17:25 to 22:30 [0925 to 1430 GMT]. Initially besides relaying the programs of Central People's Broadcasting Station and the Henan People's Broadcasting Station, the station will also broadcast local program which include news about Luoyang, information about events in Luoyang, a request program, a science program, a study program and advertisement as well as all kinds of cultural programs. [HK070222 Zhengzhou Henan Provincial Service in Mandarin 1100 GMT 29 Apr 81 HK]

CSO: 5500/4001

## VIETNAM

### BRIEFS

NATIONWIDE SIGNAL, LIAISON NETWORK--During the first 3 months of 1981 the post and telegraph sector has installed another 734 km of telegraph poles, 3,733 km of telegraph cable, 120 telephone switchboards, and 2,511 telephones. The sector has also expanded the telephone networks from Nha Trang City to Thuan Hai Province and Ho Chi Minh City and from Hanoi to Haiphong City. [BK290301 Hanoi Domestic Service in Vietnamese 2300 GMT 26 Apr 81]

CSO: 5500/4578

## BRAZIL

### BRIEFS

RADIO LICENSES GRANTED--President Figueiredo has signed a decree authorizing the following organizations to operate medium wave radio stations: Juiz de Fora Network owned by Radio Difusao Limitada located in Juiz de Fora, Minas Gerais State; (Radio Difusao Mari Moto Limitada) located in (Jaci Parana), Rondonia State; Radio Dourados do Sul Limitada located in Dourados, Mato Grosso do Sul State, and (Radio Industrial de Varga Grande Limitada) located in (Varga Grande), Mato Grosso State. The decree also authorizes Radio Princesa do Jacui Limitada, located in Cachoeira do Sul, Rio Grande do Sul State, to increase its power output. The license of (Ceara Radio Club S.A.) has been renewed for another 10 years and the license of (Radio and TV Broadcasting Porto Alegrense S.A.) had been renewed for another 15 years. [PY061816 Brasilia Domestic Service in Portuguese 2200 GMT 4 May 81 PY]

CSO: 5500/2207

# VARIOUS TELECOMMUNICATIONS EVENTS REPORTED

## Thoy Telephone Link

Tehran KAYHAN INTERNATIONAL in English 13 Apr 81 p 3

[Text] Tehran (PARS)--The spokesman for the communications of Iran announced that Khol (northwestern Iran) was linked up with the international automatic telephone network.

"From now on, the people of Khol can automatically and without help of an operator, directly dial their desired number and contact any place in the world," added the spokesman.

## Telephone Center in West Karand

Tehran TEHRAN TIMES in English 22 Apr 81 p 3

[Text] Tehran--A 200-line automatic telephone center was opened in West Karand, Kermanshahan, the Persian daily ETTELA'AT reported yesterday.

The center's inauguration was presided over by Majlis deputy and Tehran Friday Prayers Leader Hojjatoleslam Seyed Ali Khamenei.

Khamenei spoke on the safeguarding of unity and rehabilitation of the country. He told the gathering: "Of course your communication with the other people of the country is spiritual. Now, the telephonic communication is superficial and it must be used to foster spiritual communication."

Also present in the inauguration were Kermanshahan Governor-General Zar'eh and certain provincial officials.

## Equipment Confiscated From American

Tehran TEHRAN TIMES in English 21 Apr 81 p 1

[Text] Hamadan (PARS)--From the residence of an American engineer Georgie Subek at Avenue Sheer-e-Sangi in Hamadan, equipments including 2 wireless, one test unit and a number of controlling devices and sensitive electrical material were discovered and confiscated.

As per the reporting of Hamadan's Central Islamic Revolution Committee, these equipments were procured from the house of the American who was previously working in Radar Subashi and Filco Company and is presently on the run.

The landlord of the American has been subjected to interrogation.

#### Official Tender for Cable

Tehran TEHRAN TIMES in English 27 Apr 81 p 3

[Text] Telecommunication Company of Iran, Tehran, Dr. Ali Shariati Bldg Building No. 5, Tender Notice No. 60/3

The Telecommunication Company of Iran located at Dr. Ali Shariati Ave., Bldg. No. 5 intends to purchase by way of Tender 11210 Kilo Meters of Burried and Duct Jelly filled and conduit unfilled cable on basis of C&F delivery to Khorramshahr, Bandar Khomeini, Djulfa, or one of the T.C.I.'s stores in Tehran in accordance with the attached Technical Specifications, Draft Contract and Tender conditions.

Prospective applicants should pay Rls.1000 (documents fee) to the account No. 90018 of Bank Mellī Iran, Dr. Ali Shariati Branch, and receive the tender documents which consist of tender conditions, Draft Contract and Technical specifications, sign them and attach them to their offer in 3 sealed envelopes marked A, B, and C and hand it to the General secretariate department of T.C.I., Second Floor, Room 205 at the said address against a receipt.

Applicants residing abroad are exempted from paying Rls.1000 fees in the case of having no agency in Iran. The tender documents will be mailed to the address of such applicants.

Tenders received not later than 1 o'clock p.m. on Sunday 19 July 1981 (28.4.60) will be opened by the Tender committee at 10.00 o'clock on Monday 20 July 1981 (29.4.60) in Room No. 209, with above address.

Tenderers or their authorized representatives withholding a letter of introduction, may attend the tender committee.

Telecommunication Company of Iran is entitled to reject one or all the bids received./W

Purchasing Department of T.C.I.. IRTELCO. Cables: Tehran. TELEX: 2799 TCI TN. MA-1803.

CSO: 5500/5510



ERICSSON, PHILIPS BUILD WORLD'S MOST MODERN PHONE SYSTEM

Stockholm DAGENS MYHETER in Swedish 12 Apr 81 p 40

[Article by Sven-Ivan Sundqvist: "Show Piece of the World's Telephone Systems"]

[Text] The business LM Ericsson is doing in Saudi Arabia in cooperation with Dutch Philips may be the most spectacular LM has done abroad. In January 1978, when the first contract was signed, Saudi Arabia had telephones in only six of its towns. The total of lines then installed was 20,000. It might have taken a full day to call from the capital, Riyadh, to Jeddah on the Red Sea. Today, about 3 years later, Saudi Arabia has the world's most modern telephone system. The number of installed lines has now reached 700,000. Within 3 years there will be 1.2 million lines. From Riyadh one can call directly to the Western world. (Today there are no direct lines from Stockholm to Riyadh.)

The contract for modernization of Saudi Arabia's telephone system has now reached the sum of 22 billion kronor for the three main contractors, LM. Philips, Bell Canada, and the South Korean subcontractor DONG Ah.

Following are rough estimates of the contract amounts distributed among them in billions of kronor:

LM	6
Philips	6
Dong Ah (South Korea)	5
Bell Canada	5

To this should be added Western Electric's contract for 300 radio link towers in various locations and the American company Harris' contract for 13 satellite stations for areas where radio link towers are not suitable. Together Western Electric's and Harris contracts may total about 5 billion kronor.

In addition, it is reasonable that the Ministry's two consultants, American Arthur D. Little and Norwegian Norconsult, will receive a nice sum for their services.

30 Billion

In total, Saudi Arabia may have signed contracts for close to 30 billion kronor, which will provide the country with its supermodern telephone system, the world's most advanced technology.



The importance to LM of the Saudi Arabian contracts can probably not be overestimated:

The Saudi contract of January, 1978 means a breakthrough for the AXE system.

The large scale of the Saudi project has given LM valuable experience in administration of giant projects.

Today LM, together with Philips, is established in a rich market, which when the present expansion phase is completed will still provide no more than 12 telephones per 100 of the population. (In Sweden the figure is 75 telephones per 100 inhabitants.)

#### "Army" of 6000

The Saudi project is a showpiece for the rest of the Arab world and for the entire world. The frequency of people involved in telecommunications visiting Saudi Arabia is high.

Dong Ah, the South Korean company, has in a way done the "rough job" on the project. An army of 6,000 South Koreans (an army in a double sense since a South Korean can choose between serving in the army at home and a 2-year contract for serving abroad working for some contracting firm.) Dong Ah has had the subcontract for digging up streets and putting down the necessary conduits.

Seven hundred and twenty [Swedish] miles of ditches have been dug.

In an ordinary telephone cable there are 2,400 pairs of wires, which must be manually spliced together every 200 meters (the length of cable on the drum.)

#### Dutch Chief

Day and night for 3 years, in a hard climate, skilled Korean fingers have made about 50 million splices.

Philips-Ericsson was responsible for management and the high technology--while the Koreans dug and spliced--and constructed about 100 buildings in which the telephone equipment, brought from Europe by air or in trucks, was assembled.

The assistant director of the Philips-Ericsson joint venture in Saudi Arabia is a Dutchman, Carel Seegers. The chief of the LM part of the projects is Lennart Kalling, 38, a telecommunications technician and civil engineer. At first, the Philips-Ericsson project chief was an Englishman, who had to make way for the Dutchman Seegers.

LM reports nothing to its stockholders about the profitability in the Saudi project.

#### Payment in Cash

Despite the fact that Philip's first bid (but at the time not in partnership with LM) seems to have been at least 2.5 times as high as the final contract sum of January 1978 together with Ericsson, Philips-Ericsson seem to have gotten a good deal, according to local judges.

The consensus in the Swedish camp is that profitableness is not only good, but very good.

But, as we mentioned, LM people offer no comment, pointing out that for once the company has no financing problems. Saudi Arabia pays cash.

LM's activities are not limited to the Philips-Ericsson project, however. It is also engaged in a company named the Saudi-Ericsson Co, jointly owned with the Saudi partners Juffali, with LM owning 30 percent.

#### Private Telephone Exchange for Yamani

Saudi-Ericsson was established recently. It will concentrate sales on telephone instruments, private telephone exchanges (i.e. for hotels, hospitals, authorities,) signal systems, mobile telephones, entertainment, and other things.

"For 1981 we have budgeted sales of about 100 million kronor," says vice-director Bengt Forsberg. (The company's vice-director is a Saudi [sic].)

Forsberg does not deny that he hopes to be able to take advantage of Ericsson-Philip's large contract with the Saudi telephone authority.

"To be sure, all competing private exchanges can be coupled to the Philips-Ericsson network, but our knowledge of this should be a competitive advantage," says Forsberg.

Forsberg also reveals that Oil Minister Sheikh Yamani one day came to his office and ordered a private exchange for his home, with 8 incoming lines and 24 instruments attached.

#### Prince Is LM's Agent

To do business in Saudi Arabia a foreign company must be represented by an agent. The agent is responsible vis-a-vis the Saudi authorities for the foreign company's employees behaving themselves, that the foreign company pays taxes, etc. The agent has a legal right to a commission for his work, which must at most be 5 percent of the contract sum. If, for example, Philips-Ericsson's agent received 3 percent of the contract amount of, say, 20 billion kronor, the commission would be 600 million kronor.

Philips and LM Ericsson do not make known who their agent is. Everybody knows, however, that he is a businessman named Muhammad bin Fahd, son of Crown Prince Fahd.

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CSO: 5500/2192

TELECOMMUNICATIONS MINISTER KAYAL DISCUSSES CONTRACTS

Stockholm DAGENS NYHETER in Swedish 12 Apr 81 p 40

[Interview with Dr Alawi Kayal: "300,000 New Lines in Next Expansion?]

[Text] "Philips-Ericsson won its contract in open competition," replies Dr Alawi Kayal, telecommunications minister of Saudi Arabia, to the question of what the profitability of Philips-Ericsson's contract is.

The question of the profitability of the project should be asked of the enterprise, in Kayal's opinion. He also points out that it is not easy to define what is meant by profit in this case. "Large costs for development have been invested by Philips and Ericsson in their home countries," says Kayal.

DAGENS NYHETER mentions rumors to the effect that Philip's first bid--before it joined Ericsson--was over 20 billion rials, compared with Philips-Ericsson-Bell's bid of 10 billion rials for the same project. How can Philips people look you in the eye if this is true, we ask.

"Business is business," Kayal replies, without saying what he really thinks.

The first wave of orders, including that of a month ago, means that by the end of 1984 Saudi Arabia will have an installed capacity of 200,000 lines.

[Question] Are there further plans for expansion in the five-year plan?

[Answer] A further expansion of about 300,000 lines has been discussed.

High Entry Costs

The cost of entry into the Saudi market is high for a competitor of Philips-Ericsson. At the same time the margin cost of new contracts for Philips-Ericsson is low since Philips-Ericsson now has built up an "infrastructure" for its undertakings and a considerable accumulated knowledge of Saudi conditions.

We ask Kayal how he views the fact that Philips-Ericsson does not in its bids help itself to almost the entire difference between its own marginal costs and the entry costs of a new competitor.

"We have," Kayal replies, negotiated considerable discounts in the contract for another 200,000 lines recently signed. In all work, excluding the telephone centrals, we have received a 10 percent discount compared to earlier prices. For the telephone centrals we received a 3 percent discount.

A factor restraining the Saudi's expansion is that an increase in the foreign labor force is not desired. A natural question, therefore is whether the Minister sees a possibility of employing women telephone operators.

This is something we have pondered," Kayal replies. "For example, we have discussed whether we can arrange mail sorting in this country so that we could hire women. In accordance with our Islamic religion we do not wish to have men and women in the same room. But we can arrange for separate rooms with separate entrances for women, so that this is something to consider."

[Question] Does the contract with Philips-Ericsson prohibit LM Ericsson and its affiliates from doing business with Israel?

[Answer] "Yes," Kayal replies. "According to the contract with Philips-Ericsson, they are to adhere to Saudi laws and traditions."

The interview ends with Kayal showing us an album of photographs picturing "before" and "after" a campaign to keep the country's telephone stations tidy.

"If I see as much as a cigarette butt on the floor I make trouble," says Kayal.

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CSO: 5500/2192

## INTER-AFRICAN AFFAIRS

### BRIEFS

SUDAN-ETHIOPIA TELEPHONE LINE--Khartoum, 10 Apr (SUNA)--Sudan and Ethiopia agreed lately to approach the EEC to finance the telephone line linking Gedarif, Sudan, and Gondar, Ethiopia. The line, which is the last part of the African Telecommunications network, costs \$4 million. The line's vital importance lies in its ability to link Sudan with East Africa via Ethiopia. Telephone communications with the Gulf States via Sudan will also be possible when the line is completed. This last part of the African Telecommunications Network was studied last Jan. by experts of the International Telecommunications Association and their Sudanese counterparts in the Telecommunications Public Corporation. [Khartoum SUNA DAILY BULLETIN in English 10 Apr 81 p 8]

CSO: 5500



## ACI TO ACQUIRE TELEX EQUIPMENT UNDER GDR CONTRACT

Brazzaville BULLETIN QUOTIDIEN DE L'ACI in French 16 Apr 81 pp 1, 2

[Text] Brazzaville, 16 April--A contract to provide the Congolese Information Agency [ACI] 100 electronic teleprinters and a 96-line type distributor was signed yesterday (Wednesday) at 0900 at the planning ministry. This project is part of the 1981 interim program. The document was initiated by the planning minister, comrade Pierre Moussa, on behalf of the Congolese side and by comrade Augres, the commercial counselor at the GDR embassy to the Congo on the German side.

As part of the commercial credit provided to the Peoples Republic of the Congo by the GDR in 1978, the ACI is going to acquire this equipment, which should be delivered in August 1981, from the East German firm ELECTROTECHNIK ANG. The equipment will enable to establish an independent telex network--at first in Brazzaville and later at Pointe-Noire--to provide daily service and hourly national and international news to its customers. Up to now ACI has served its subscribers by means of a duplicated bulletin which appears almost 24 hours behind the events.

Instantaneous type distribution will be provided by the central distributor, installed in the ACI technical division, and connected by telephone line to the RPT 1201 teleprinters rented by subscribers. The news gathered by ACI editors and reporters and by the international wire service can then be dispatched at a moment's notice to the subscribers, after being processed in the editing room.

The RPT 1201 teleprinter is electronic. Silent, it can be running in an office without disturbing the occupant and makes less noise than a fly.

With the establishment of this independent telex network, ACI is going to enter into a phase of expansion and modernization that will coincide with the celebration of its 20th anniversary. Another national news-gathering project is going to be completed this year. This is the building of 10 broadcasting-receiving stations in Brazzaville and the nine regional capitals of our country.

These ultra-modern stations will make it possible to establish a network of regional correspondents and increase the editorial staff in Brazzaville, thus providing for the collection of regional news and its instant transmission to ACI's editorial headquarters.

Comrade Pierre Moussa, in initialing the contract last Wednesday, expressed his pleasure at the resolution of the difficulties that had hindered the project's realization in 1980. The minister of planning expressed the desire to see the other anticipated contracts with the GDR concluded in an equally cordial atmosphere.

On behalf of the GDR government and the industrial firm, comrade Augres thanked the minister of planning and all his collaborators for the diligence with which they worked to draw up the contract which was finally ready for signature. The commercial counselor assured the minister of planning that his government will do everything possible to facilitate the execution of the contract.

9516

CSO: 5500/5009



## SCANDINAVIANS TO FUND ZIMBABWE MICROWAVE NETWORK

Salisbury BUSINESS HERALD in English 14 May 81 p 1

[Text]

**SWEDISH** and Norwegian international aid agencies will bear the cost of establishing microwave telephone links between Zimbabwe, Botswana and Zambia, but the sum involved has yet to be disclosed.

Agreement on funding the project was reached in principle last March when the late Mr George Silundika, the then Minister of Roads, Road Traffic and Telecommunications, visited Sweden.

Mr Jan Cedergren, of the Swedish International Development Agency (SIDA), said this week that talks with the Ministry and the Posts and Telecommunications Corporation concerning the technical aspects of the project were continuing.

"The starting date depends on these technical discussions, but hopefully this scheme will get off the ground this year."

"The costs have yet to be finalised. I hope that in about a month's time we should have a final idea of what the whole thing is about."

Mr Cedergren added: "This is an unusual project in that telecommunications schemes are usually on loan (finance) terms. This is on a grant basis as Sweden and Norway only give aid on this basis so the foreign exchange burden to Zimbabwe will be zero, which is an important factor."

"I should add that this is part of the regional assistance to SADCC countries and therefore additional to bilateral assistance given by Sweden and Norway."

The project will be in two separate phases. The first is to link Bulawayo to Livingstone in Zambia and the other to tie into the Botswana system by linking Bulawayo to Francistown. When completed Zimbabwe's telephone system, the second largest

in Southern Africa, will be tuned into the Pan-African network.

Problems, however, will remain with Mozambique until a microwave system is established. Feasibility studies are underway to consider tying Maputo and Beira into the Pan-African network via Zimbabwe and Zambia.

Sources in the telecommunications industry said this week that Zimbabwe's other major project, the installation of an earth satellite station, was still under consideration. It was not, however, thought to be as important as establishing what is known as a Gateway Exchange in Salisbury.

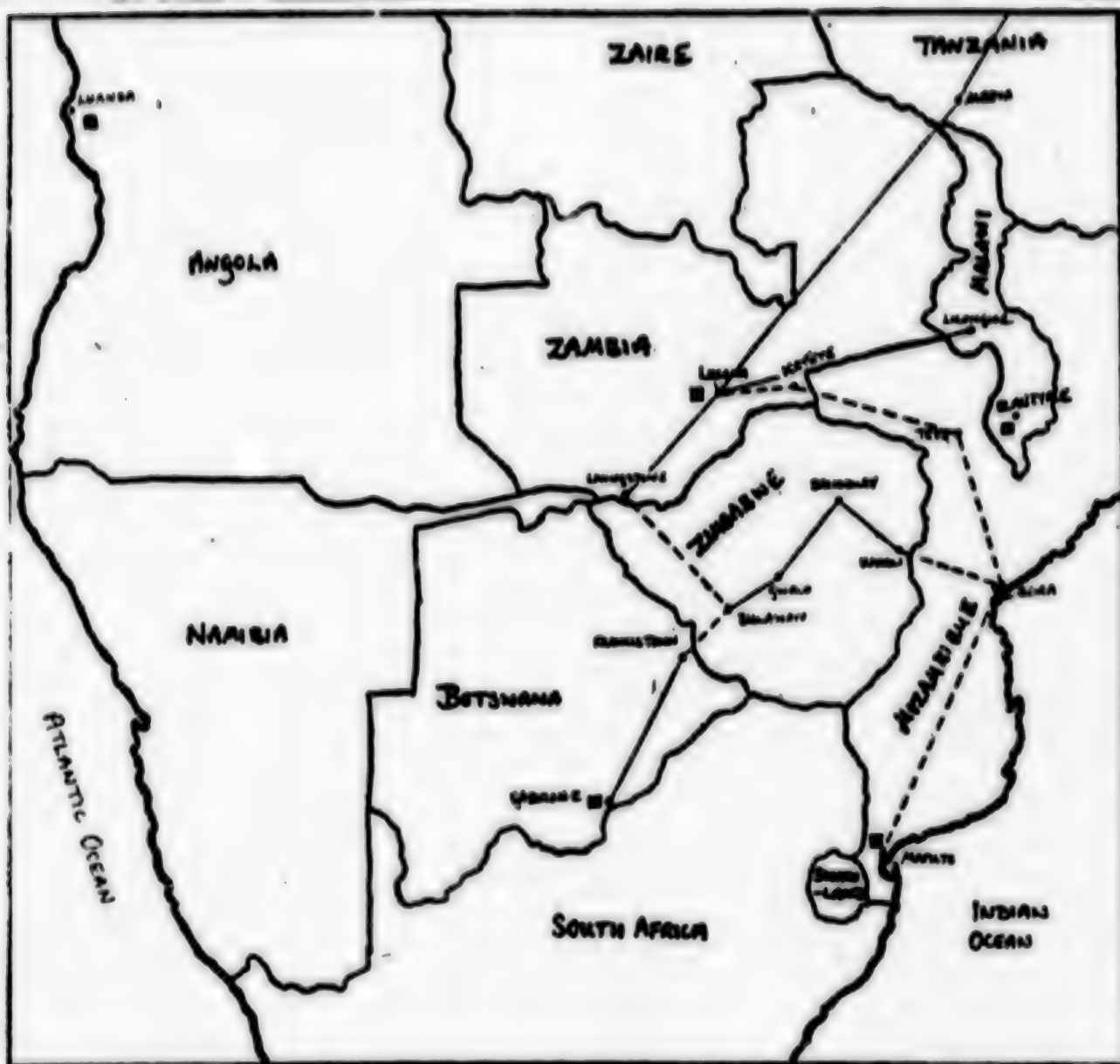
This will provide a variety of equipment to interface with all the different types of signalling used

by other countries and international circuits.

Competition to secure the contract for the earth satellite station is understood to be fierce with companies from Europe, the Far East and the United States bidding for approval.

There is a feeling, in some quarters, however, that the station is not needed as all of Zimbabwe's neighbours already have one. The region is therefore over-supplied, but bearing in mind the Government's policy of not having to depend on anyone else this scheme is likely to go ahead.

One source commented: "The international satellite network, Intelsat, says the region as a whole should share its facilities, but the matter of Zimbabwe's station has become a political issue."



**THE LINES** linking the various centres marked on the map indicate the present regional microwave

**MEDIA TRUST SETS UP PACT WITH AP**

Salisbury THE HERALD in English 14 May 81 p 5

[Text]

A BILATERAL agreement covering the exchange of information between the Zimbabwe Inter-Africa News Agency and Associated Press was signed in Salisbury yesterday by Dr Donaldson Sadza, chairman of the Zimbabwe Mass Media Trust, and Mr Andrew Torchia, AP's East Africa Bureau Chief.

The ceremony was witnessed by Mr Robert Mandevu, Executive Secretary of the Mass Media Trust, Mr Wilf Mbanga, News Editor-designate of Ziara, and Mr John Edin, Salisbury correspondent of AP.

Dr Sadza said the agreement was the first between the trust and a foreign news agency.

"We know that AP has a high reputation for a

good selection of news, honesty in their dealings and encouraging healthy relations with whoever they sign a contract with," he said.

Problems had been encountered in the setting up of both Ziara and the Mass Media Trust "but we have no doubt that we are going to succeed".

Dr Sadza outlined the Trust's position concerning its relations with similar organisations.

"It is our intention to work very hard at making friends and also work very hard at deleting those areas where enmity has been bred before us and discourage those who promote disharmony."

Mr Torchia said: "I would like to express AP's pleasure in helping Zimbabwe set up its own Press."

CSO: 5500

ZIMBABWE

BRIEFS

ZBC EXPANSION--The need for increased funds to buy new and additional equipment and enlarge and improve studios was stressed last week by ZBC's Deputy Director-General Mr Tirivastu Kangai. A priority would be improvements to Radio Two's Harare studios which were poor compared to Radio One's studios at Pocket's Hill, he said. Independence had brought a rapid expansion of news coverage in both urban and rural areas but the corporation "continued to operate on an old budget which did not correspond to the new reality at ZBC." He added: "Our financial figures were not good then, neither are they good today." Addressing Radio Two staff, Mr Kangai said the station should continue to promote Zimbabwe's culture. It was the "people's station." He cautioned announcer-producers to broadcast correct information, avoiding anything libellous or defamatory. [Text]  
[Salisbury THE SUNDAY MAIL in English 10 May 81 p 1]

CSO: 5500

## GOVERNMENT FUNDING FAVORS NEW COMMUNICATIONS TECHNIQUES

Paris ELECTRONIQUE ACTUALITES in French 17 Apr 81 pp 1, 8

[Article by D. Levy]

[Text] The Directorate General of Telecommunications has available, for this year, 1981, total investment credits amounting to 26 billion francs. Of this total almost 20 billion will be used for purchasing telecommunications equipment. A little more than 2 billion will go to research and development and about 2.5 billion will cover real property expenditures, while the rest will go for various purchases and for general services. Although they mark a ceiling for telephone equipment orders, these credits emphasize the definite priority given to new techniques: time progression and upsurge in orders for digital microwave links, contracts pertaining to Telecom 1 Satellite, to optical fiber links and to telematics, and sizable study contracts concluded with industrialists. At the same time, 1981 marks another downturn for analog systems. No more 12-channel terminals for the national network will be ordered.

Telecommunications program authorizations for 1981 are about equal in number to last year's authorizations (respectively, 26 billion and 25.5 billion). Nevertheless, the two budgets are characterized by rather great differences. Although last year's budget made it possible to continue digitalizing the network, it might be described, overall, as rather traditional. This year's budget is "tipped" almost completely toward the new techniques.

In switching, the objective consists in having the total number of telephone lines increase from 15.8 million at the end of 1980 to 17.55 million at the end of 1981. All the equipment ordered this year will pertain to electronic exchanges, over two-thirds of which will be of the time type. Expansion of the network will be accomplished by means of establishing 1.5 million new subscriber equipment, while old exchanges totaling 1.6 million old subscriber equipment will be replaced with modern equipment. Finally, new transit exchanges, representing a total traffic on the order of 45,000 erlangs [a unit of communication traffic density], will be ordered by the administration solely in time technique.

## Preparation for the Coming of Fiber Optics

In terms of orders, the situation of communications industrialists continues to deteriorate. Only the sector of digital microwave links (there have been no more orders for analog equipment since last year) will be favored by a sharp increase of close to 20 percent over 1980. Moreover, an increase in MIC 30-channel terminal equipment, estimated at around 2,000, will be noted.

On the other hand, orders for coaxial cables will undergo a drastic decline with less than 12,000 pairs X kilometers scheduled (there were more than double this in 1980). Finally, the administration has decided no longer to order 12-channel analog equipment, starting in 1981 for the national network (with the exception of some specific systems for links with foreign countries). These measures aim, of course, at preparing for the introduction of optical fibers (sizeable orders are expected starting next year).

As of this year, however, communications by optical fibers will share some 400 million francs in credits for various experiments (especially at Biarritz). Other leading programs, like telematics and the Telecom 1 national satellite, will benefit from orders by the DGT (Directorate General of Telecommunications) with 700 million francs and 300 million francs, respectively.

A final noteworthy observation in the 1981 program authorizations: the very large increase in credits for research and development (over 2 billion francs compared with 990 million francs last year). Almost 80 percent of that total will go to telecommunications industrialists and the rest to the CNET [National Center for Telecommunications Studies].

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CSO: 5500/2200



# MOST OF COUNTRY TO SEE CONTINENT SATELLITE TV

Stockholm DAGENS NYHETER in Swedish 26 Mar 81 p 29

[Article by Per-Erik Landqvist: "Easy for Swedes to Receive Picture"]

[Text] Three fourths of Sweden's eight million inhabitants will be able to receive television programs from West Germany, France, and Luxemburg when these countries have their TV satellites in position.

"Southern Sweden will be especially favored," says Professor Goran Lind of Lund University, who has researched the matter. Scania will look almost like a scoreboard if one lists the transmissions that can be taken in by a TV antenna one meter in diameter. It is the diameter of a TV antenna that determines the cost to the consumer.

No bills will come from European TV companies. What we, and other countries as well, will receive is something called spillover reception.

## Easier Than Calculated

There is no price tag on this. So it is only a matter of beginning to watch.

"My studies show," says Professor Lind, "that the spillover from the TV satellites is much more easily received than was formerly believed."

Professor Lind does not dare give exact prices for the antennas. "The very cheapest, those of 1 meter diameter, of the type adequate for southern Sweden, will cost about 2,000 kronor. On the other hand, antennas 3 meters in diameter will not be manufactured in adequate numbers. This means that the price will be at least ten times higher.

The great playgrounds of satellite TV are found in Central Europe, where West Germany and France are already underway, and where Switzerland and Luxemburg are just behind, Luxemburg with commercial TV [sic].

The West German satellite is placed above the equator, at 19 degrees west longitude. This means that Stockholm can get along with an inexpensive antenna of less than 1 meter in diameter.



## English Language

In the matter of language, we Swedes are more oriented toward English than German or French, but a future British satellite would be of use only in a limited region, mainly along the west coast and in northern parts of the country. Together with a research team Goran Lind has studied in detail during the past 6 months the technical conditions under which Swedish and Scandinavian viewers can make use of the continental satellite broadcasts. The Lind group has reached only positive results.

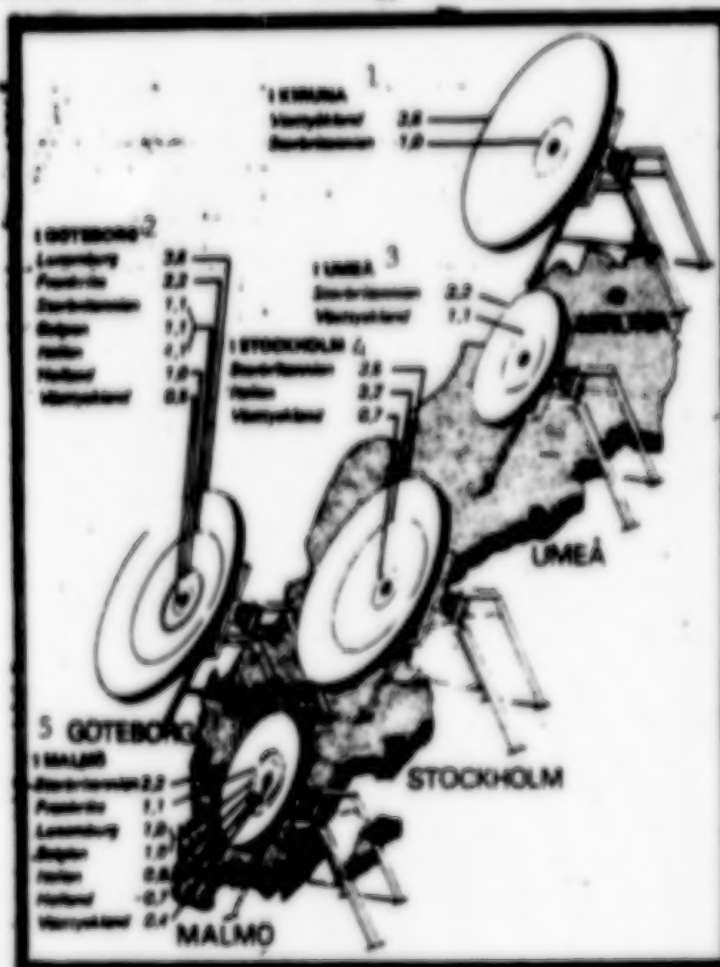
## Energy Stinginess

In conclusion, Goran Lind asserts:

"The present marketing distribution network of TC consumes an extraordinary amount of energy. Energy in part cooled off, but also radiates, thereby contributing to electromagnetic pollution of nature. One of the great advantages of satellite TV is its energy saving. It consumes about 10,000 times less electricity than the same thing carried by a market distribution network of the type we have today. In addition, it is coupled to a renewable source, the sun. So that even if one includes the energy used to send up the satellite, it saves energy several times over.

## Key:

- 1) In Kiruna  
West Germany  
Great Britain
- 2) In Goteborg  
Luxemburg  
France  
Great Britain  
Belgium  
Italy  
Holland  
West Germany
- 3) In Umea  
Great Britain  
West Germany
- 4) In Stockholm  
Great Britain  
Italy  
West Germany
- 5) In Malmo  
Belgium  
Great Britain  
France  
Luxemburg  
Italy  
Holland  
West Germany



It is the size of the so-called parabolic antennas that will determine which satellites can be seen in Sweden. From Professor Goran Lind's map it appears, for example, that 40-centimeter antenna suffices for viewing West German TV in Scania, while in Umea an antenna of over 1 meter is required.

11267

CSO: 5500/2192

## BRIEFS

TEXT-TELEPHONE NETWORK--Toward the end of this year the deaf and hard of hearing will, like persons with speech defects, be able to telephone friends and various officials via the text-telephone. At that time the telecommunications administration will have completed the first stage of the service that will make this possible. The Telecommunications Administration's center will be open from 0700 to 2100 hours on weekdays, and for somewhat shorter hours on Saturdays and Sundays. Technically, the service functions by Administration personnel "translating" the spoken word into text on the text-telephone's screen and vice versa. The system will be fully developed in 1985. [Text] [Stockholm DAGENS NYHETER in Swedish 9 Apr 81 p 40]

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CSO: 5500/2192

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**DATE FILMED**

June 4, 1981